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Examiner: To be assigned

Group Art Unit: 1645

For: RAPID DETERMINATION OF PROTEIN GLOBAL FOLDS)

INFORMATION DISCLOSURE STATEMENT

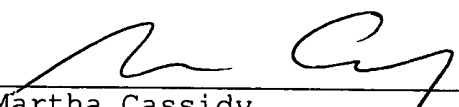
Dear Sir:

Applicants have submitted pages v-xv of reference #30, comprising the table of contents and will supply a copy of any

section of this reference should the Examiner request it.

Respectfully submitted,

By


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Attorney for Applicants
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Enclosure(s):

1496-205.ids

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Complete if Known

Application Number 09/983,020
Filing Date October 22, 2001
First Named Inventor Steven W. HOMANS et al.
Group Art Unit 1645
Examiner Name To be assigned

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Attorney Docket Number 1496-205

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U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
		Number	Kind Code ² (if known)		
	1	5,817,474		Brown	October 6, 1998
	2	6,335,196		Anderson, III et al.	January 1, 2002
	3	6,340,578		Anderson, III et al.	January 22, 2002
	4	6,111,066		Anderson, III et al.	August 29, 2000

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee of Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T ⁶
		Office ³ Code	Number ⁴	Kind ⁵ (if known)			

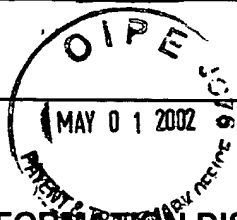
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¹Unique citation designation number. ²See attached Kinds of U.S. Patent Documents. ³Enter Office that issued the document, by the two-letter code.

⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶Applicant is to place a check mark here if English language translation is attached. AB indicates that only an English language abstract is attached.



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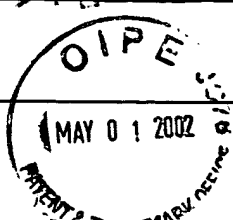
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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

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Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
/	5	Ramirez et al., "Modulation of the Alignment Tensor of Macromolecules Dissolved in a Dilute Liquid Crystalline Medium," <u>J. Am. Chem. Soc.</u> 120:9106-9107, 1998.	
.	6	Tjandra, et al., "Magnetic Field Dependence of Nitrogen-Proton <i>J</i> Splittings in ¹⁵ N-Enriched Human Ubiquitin Resulting from Relaxation...", <u>J. Am. Chem. Soc.</u> , 118:6264-6272, 1996.	
.	7	Bax et al., "High-Resolution Heteronuclear NMR of Human Ubiquitin in an Aqueous Liquid Crystalline Medium," <u>J. Biomol. NMR</u> , 10:289-292, 1997.	
.	8	Losonczi et al., "Improved Dilute Bicelle Solutions for High-Resolution NMR of Biological Macromolecules," <u>J. Biomol. NMR</u> , 12:447-451 1998.	
.	9	Prosser et al., "Use of a Novel Aqueous Liquid Crystalline Medium for High-Resolution NMR of Macromolecules in Solution," <u>J. Am. Chem. Soc.</u> 120:11010-11011, 1998.	
/	10	Clore et al., "Measurement of Residual Dipolar Couplings of Macromolecules Aligned in the Nematic Phase of a Colloidal...", <u>J. Am. Chem. Soc.</u> 120:10571-10572, 1998.	
.	11	Hansen et al., "Tunable Alignment of Macromolecules by Filamentous Phage Yields Dipolar Coupling Interactions," <u>Nature Structural Biology</u> 5(12):1065-1074, 1998.	
/	12	Kiddle et al., "Residual Dipolar Couplings as New Conformational Restraints in Isotopically ¹³ C-Enriched Oligosaccharides," <u>FEBS Letters</u> 436:128-130, 1998.	
.	13	Wang et al., "A Liquid Crystalline Medium for Measuring Residual Dipolar Couplings Over a Wide Range of Temperatures," <u>J. Biomol. NMR</u> , 12:443-446, 1998.	
/	14	Ottiger et al., "Bicelle-Based Liquid Crystals for NMR-Measurement of Dipolar Couplings at Acidic and Basic pH Values," <u>J. Biomol. NMR</u> , 13:187-191, 1999.	
.	15	Fleming et al., "Cellulose Crystallites: A New and Robust Liquid Crystalline Medium for the Measurement of Residual Dipolar Couplings," <u>J. Am. Chem. Soc.</u> 122:5224-5225, 2000.	
.	16	Rückert et al., "Alignment of Biological Macromolecules in Novel Nonionic Liquid Crystalline Media for NMR Experiments," <u>J. Am. Chem. Soc.</u> 122:7793-7797, 2000.	
.	17	Mueller et al., "A Method for Incorporating Dipolar Couplings Into Structure Calculations in Cases of (Near) Axial Symmetry of Alignment," <u>J. Biomol. NMR</u> 18:183-188, 2000.	
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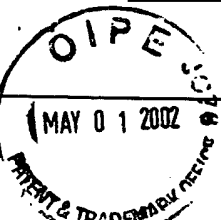
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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

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Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
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	20	Wang et al., "Simultaneous Measurement ¹ H- ¹⁵ N, ¹ H- ¹³ C' and ¹⁵ N- ¹³ C' Dipolar Couplings in a Perdeuterated 30 kDa Protein Dissolved in a Dilute Liquid Crystalline Phase," <u>J. Am. Chem. Soc.</u> 120:7385-7386, 1998.	
	21	Ottiger et al., "Measurement of J and Dipolar Couplings from Simplified Two-Dimensional NMR Spectra," <u>J. Magn. Reson.</u> 131:373-378, 1998.	
	22	Lerche et al., "Pulse Sequences for Measurement of One-Bond ¹⁵ N- ¹ H Coupling Constants in the Protein Backbone," <u>J. Magn. Reson.</u> 140:259-263, 1999.	
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	24	Clore et al., "Direct Structure Refinement Against Residual Dipolar Couplings in the Presence of Rhombicity of Unknown Magnitude," <u>J. Magn. Reson.</u> 131:159-162, 1998.	
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	29	Ikura et al., "A Novel Approach for Sequential Assignment of ¹ H, ¹³ C, and ¹⁵ N Spectra of Larger Proteins: Heteronuclear Triple-Resonance Three-Dimensional NMR Spectroscopy," <u>Biochemistry</u> 29:4659-4667, 1990.	
	30	Brünger, X-PLOR version 3.1: "A system for X-Ray Crystallography and NMR", Yale University Press, New Haven, CT., v-xv, 1987.	
	31	Losonczi et al., "Order Matrix Analysis of Residual Dipolar Couplings Using Singular Value Decomposition," <u>J. Magn. Reson.</u> 138:334-342, 1999.	
	32	Tolman et al., "Nuclear Magnetic Dipole Interactions in Field-Oriented Proteins: Information for Structure Determination in Solution", <u>Proc. Natl. Acad. Sci. USA</u> 92:9279-9283, 1995.	



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	33	Tjandra et al., "Direct Measurement of Distances and Angles in Biomolecules by NMR in a Dilute Liquid Crystalline Medium," <u>Science</u> 278:1111-1113, 1997.	
	34	Fowler et al., "Rapid Determination of Protein Folds Using Residual Dipolar Couplings," <u>J. Mol. Biol.</u> 304:447-460, 2000.	
	35	Hus et al., "Determination of Protein Backbone Structure Using Only Residual Dipolar Couplings," <u>J. Am. Chem. Soc.</u> 123:1541-1542, 2001.	
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